

Notice of Allowability

Application No.

09/809,586

Examiner

TRONG PHAN

Applicant(s)

SHIRLEY ET AL.

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Appeal Brief filed on 12/2/05.
2. ☒ The allowed claim(s) is/are 1-12 and 14-60.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

TRONG PHAN
PRIMARY EXAMINER

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

A) The memory device including all memory core blocks from different first and second banks being interleaved in a strip in an alternating fashion through a shared sense amplifier as recited in claims 1-12 and 14-59 has not been found in the prior art.

For example, as shown in Fig. 3 of the present invention:

In strip 370, the memory cores in bank0 320 are interleaved with the memory cores in bank1 330 through shared sense amplifier 340; the memory cores in bank1 330 are interleaved with the memory cores in bank0 331 through shared sense amplifier 346 and so on in an alternating fashion;

In strip 372, the memory cores in bank2 324 are interleaved with the memory cores in bank3 334 through shared sense amplifier 342; the memory cores in bank3 3304 are interleaved with the memory cores in bank2 through shared sense amplifier 348 and so on in an alternating fashion;

In strip 374, the memory cores in bankn-1 328 are interleaved with the memory cores in bankn 338 through shared sense amplifier 344; the memory cores in bankn 338 are interleaved with the memory cores in bankn-1 through shared sense amplifier 350 and so on in an alternating fashion.

B) The multibank memory architecture allowing simultaneous access of some of a plurality of memory banks comprising a horizontal strip of all of memory cores from only two of the memory banks interspersed between shared sense amplifiers, each memory core being part of one of N memory banks wherein each bank is selectable to

activate or deactivate all of its associated memory cores, the strip having the memory cores laid out so that no two memory cores of the same memory bank shares a common sense amplifier as recited in claim 60 has not been found in the prior art.

For example, as shown in Fig. 3 of the present invention, in the first horizontal strip 370, each of memory cores in the same bank0 320 must share a common sense amplifier 340 with each of the memory cores in the other memory bank1 330 and so on in the same manner as in strips 372 and 374.

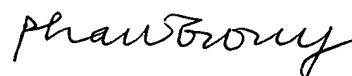
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRONG PHAN whose telephone number is (571) 272-1794. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AMIR ZARABIAN can be reached on (571)272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TRONG PHAN
PRIMARY EXAMINER